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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/633,984	08/04/2003	Mark Gurvich	PWV1.PAU.49	5618
7590	03/17/2004		EXAMINER	
David L. Henty Myers Dawes Andras & Sherman LLP Suite 1150 19900 MacArthur Blvd. Irvine, CA 92612			CHOE, HENRY	
			ART UNIT	PAPER NUMBER
			2817	

DATE MAILED: 03/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/633,984	GURVICH ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Henry K Choe	2817	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 August 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 10-20 is/are rejected.
- 7) ☒ Claim(s) 7-9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some    \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                                |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____   |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input checked="" type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>11/14/2003</u> .  | 6) <input type="checkbox"/> Other: _____   |



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10/633,984

APPLICATION NUMBER	FILING/RECEIPT DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO./TITLE
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Application Number:

Attachment to Paper Number:

### NOTICE OF INFORMAL APPLICATION

This application is considered to be informal since it does not comply with the regulations for the reason(s) indicated below. The period within which to correct the informalities noted below and avoid abandonment is set in the accompanying Office action.

**A. A new oath or declaration, identifying this application by the application number is required. The oath or declaration does not comply with 37 CFR 1.63 in that it:**

- ☐ 1. does not identify the residence (e.g., city and either state or foreign country) of each inventor.
- ☐ 2. does not identify each inventor by full name, including the family name and at least one given name without abbreviation.
- ☒ 3. does not identify the complete post office address of each inventor.
- ☐ 4. does not identify the citizenship of each inventor.
- ☐ 5. does not state whether the inventor is a sole or joint inventor.
- ☐ 6. does not state that the person making the oath or declaration:
  - ☐ has reviewed and understands the contents of the specification, including the claims, as amended by any amendment specifically referred to in the oath or declaration.
  - ☐ believes the named inventor or inventors to be the original and the first inventor or inventors of the subject matter which is claimed and for which a patent is sought.
  - ☐ acknowledges the duty to disclose information which is material to patentability as defined in 37 CFR 1.56.
- ☐ 7. does not identify the foreign application for patent or inventor's certificate on which priority is claimed pursuant to 37 CFR 1.55, and any foreign application having a filing date before that of the application on which priority is claimed, by specifying the application number, country, day, month, and year of its filing.
- ☐ 8. does not state that the person making the oath or declaration acknowledges the duty to disclose information which is material to patentability as defined in 37 CFR 1.56 which became available between the filing date of the prior application and the national or PCT International filing date of the continuation-in-part application which discloses and claims subject matter in addition to that disclosed in the prior application (37 CFR 1.63(e)).
- ☐ 9. contains non-initialed alterations (37 CFR 1.52(c)).

**B. Applicant is required to provide:**

- ☐ 1. Proof of authority of the legal representative under 37 CFR 1.44.
- ☐ 2. An abstract in compliance with 37 CFR 1.72(b).

**C. ☐ OTHER:**

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## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4, 5, 10, 11, 13, 15-17 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Funada et al (Fig. 1).

Regarding claims 1 and 16, Funada et al (Fig. 1) discloses an amplifier circuit comprising an input (INPUT), an amplifier device (4), a small signal linearization circuit (2, 3) which is coupled between the input (INPUT) and the amplifier device (4) for compensating the small signal nonlinearity, and an output (OUTPUT) which is coupled to the amplifier device (4).

Regarding claims 2 and 17, the amplifier device (4) in Fig. 1 of Funada et al is functionally equivalent to the claimed LDMOS transistor.

Regarding claim 4, the small signal linearization circuit (2, 3) which reduces the magnitude of the input signal (see column 14, lines 1-13).

Regarding claim 5, the small signal gain adjustment circuit (3) has a gain response substantially opposite to the gain response of the amplifier device (4) (see column 14, lines 1-13).

Regarding claims 10, 13, 15, 16 and 20, Funada et al (Fig. 1) discloses an amplifier circuit comprising an RF input (INPUT), a main amplifier (4), a main path small

signal gain adjustment circuit (2, 3), a main amplifier output sampling coupler (6), a first delay (5), a carrier cancellation combiner (8), an error amplifier (10), a second delay (7), an error injection coupler (11), and an RF output (OUTPUT).

Regarding claim 11, the error amplifier (10) includes one amplifier device and the RF feedforward amplifier (Fig. 1) further includes an error path small signal gain adjustment circuit (9) which is coupled between the carrier cancellation combiner (8) and the error amplifier (10) for compensating for the small signal nonlinearity.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 6, 12, 14, 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Funada et al (Fig. 1).

Funada et al (Fig. 1) discloses all the limitations in the claims except for that the amplifier device being operated in class AB or in class B, the gain response of the amplifier device corresponding to the small signal region includes the range of about -15 dB to -5 dB of maximum input power, and the small signal region of the input signal includes the input signal power region less than about  $P_{in(max)}$ -5db. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have implemented the specific values of the components,

since they are based on the routine experimentation to obtain the optimum operating parameters.

***Allowable Subject Matter***

Claims 7-9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Patent numbers (4,595,882; 6,424,214) are the feedforward amplifiers.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Henry Choe whose telephone number is (571) 272-1760.



**HENRY CHOE  
PRIMARY EXAMINER**